

Appln. No. 10/694,555
Amdt. dated December 19, 2005
Reply to Office Action dated September 23, 2005

IN THE CLAIMS:

Please amend claims 1-14 as follows and add new claims 15-20.
The following listing of claims will replace all prior versions,
and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended). A radio communication system
comprising:

a primary station, ~~and~~

a plurality of secondary stations, ~~the system having~~

5 a communication channel between the primary station and a
secondary station, the communication channel comprising an uplink
control channel and a downlink control channel for the
transmission of control information between the primary and
secondary stations, and

10 a data channel for the transmission of data packets,
~~characterised in that~~ each of the primary and secondary
stations ~~have~~ having traffic reduction means for reducing traffic
in the uplink and downlink control channels, and control means
for activating the traffic reduction means,

15 the control means activating the traffic reduction means
after a first data transmission on the data channel to cause the

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uplink and downlink control channels to enter into a dormant state during which control information is transmitted on the uplink and downlink control channels,

- 20 the traffic reduction means being arranged to cause transmission of a reduced amount of control information on the uplink and downlink control channels while the uplink and downlink control channels are in the dormant state than the amount of control information transmitted on the uplink and
25 downlink control channels during transmission of data packets on the data channel.

Claim 2 (Currently Amended). A system as claimed in claim 1, ~~characterised in that~~ wherein the control means activates the traffic reduction means after a predetermined period has passed without transmission of a data packet on the data channel after
5 the first data transmission.

Claim 3 (Currently Amended). A system as claimed in claim 2, ~~characterised in that the traffic reduction means comprises means for transmitting a reduced amount of control information compared to that transmitted during transmission of data packets~~
5 1, wherein the control means activates the traffic reduction means immediately after the first data transmission when the

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control means determines that no additional data transmission is currently available for transmission.

Claim 4 (Currently Amended). A system as claimed in ~~any~~
~~one of claims claim 1 to 3, characterised in that~~ wherein the
traffic reduction means are arranged to transmit control
information is transmitted on the uplink and downlink control
5 channels in allocated time slots [[,]] and ~~in that the traffic~~
~~reduction means operates~~ operate to transmit control information
in one out of every N available slots when the uplink and
downlink control channels are in the dormant state, where N is an
integer greater than 1.

Claim 5 (Currently Amended). A system as claimed in claim
1, ~~characterised in that~~ wherein the traffic reduction means
~~comprises means for interrupting~~ are arranged to interrupt
transmission of the uplink and downlink control channels after a
5 time period has elapsed without transmission of a data packet on
the data channel while the uplink and downlink control channels
are in the dormant state.

Claim 6 (Currently Amended). A primary station for use in a
radio communication system having a communication channel between
the primary station and a secondary station, the communication

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channel comprising an uplink and a downlink control channel for
5 the transmission of control information between the primary
station and the secondary station, and a data channel for the
transmission of data packets, ~~characterised in that~~ the primary
station comprising:

traffic reduction means ~~are provided~~ for reducing traffic in
10 the downlink control channel, and

control means ~~are provided~~ for activating the traffic
reduction means,

the control means activating the traffic reduction means
after a first data transmission on the data channel to cause the
15 uplink and downlink control channels to enter into a dormant
state during which control information is transmitted on the
uplink and downlink control channels,

the traffic reduction means being arranged to cause
transmission of a reduced amount of control information on the
20 uplink and downlink control channels while the uplink and
downlink control channels are in the dormant state than the
amount of control information transmitted on the uplink and
downlink control channels during transmission of data packets on
the data channel.

Claim 7 (Currently Amended). A primary station as claimed
in claim 6, ~~characterised in that~~ wherein the control means

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activates the traffic reduction means after a predetermined
period has passed without transmission of a data packet on the
5 data channel after the first data transmission.

Claim 8 (Currently Amended). A primary station as claimed
in claim 6 ~~or 7, characterised in that~~ wherein the traffic
reduction means are arranged to transmit control information ~~is~~
~~transmitted on the uplink and downlink control channels in~~
5 ~~allocated time slots [[,] and in that the traffic reduction~~
~~means comprises means for transmitting a reduced amount of~~
~~control information compared to that transmitted during~~
~~transmission of data packets by transmitting~~ operate to transmit
control information in one out of every N available slots when
10 the uplink and downlink control channels are in the dormant
state, where N is an integer greater than 1.

Claim 9 (Currently Amended). A secondary station for use in
a radio communication system having a communication channel
between the secondary station and a primary station, the
communication channel comprising an uplink and a downlink control
5 channel for the transmission of control information between the
primary station and the secondary station, and a data channel for
the transmission of data packets, ~~characterised in that the~~
secondary station comprising:

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traffic reduction means ~~are provided~~ for reducing traffic in
10 the uplink control channel, and
control means ~~are provided~~ for activating the traffic
reduction means,
the control means activating the traffic reduction means
after a first data transmission on the data channel to cause the
15 uplink and downlink control channels to enter into a dormant
state during which control information is transmitted on the
uplink and downlink control channels,
the traffic reduction means being arranged to cause
transmission of a reduced amount of control information on the
20 uplink and downlink control channels while the uplink and
downlink control channels are in the dormant state than the
amount of control information transmitted on the uplink and
downlink control channels during transmission of data packets on
the data channel.

Claim 10 (Currently Amended). A secondary station as
claimed in claim 9, ~~characterised in that~~ wherein the control
means activates the traffic reduction means after a predetermined
period has passed without transmission of a data packet on the
5 data channel after the first data transmission.

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Claim 11 (Currently Amended). A secondary station as
claimed in claim 9 ~~or 10, characterised in that~~ wherein the
traffic reduction means are arranged to transmit control
information is transmitted in allocated time slots ~~[[,]]~~ and ~~in~~
5 ~~that the traffic reduction means comprises means for transmitting~~
~~a reduced amount of control information compared to that~~
~~transmitted during transmission of data packets by transmitting~~
operate to transmit control information in one out of every N
available slots when the uplink and downlink control channels are
10 in the dormant state, where N is an integer greater than 1.

Claim 12 (Currently Amended). A method of operating a radio
communication system comprising a primary station and a plurality
of secondary stations, the system having a communication channel
between the primary station and a secondary station, the
5 communication channel comprising an uplink and a downlink control
channel for the transmission of control information between the
primary station and the secondary station, and a data channel for
the transmission of datapackets, ~~characterised by the primary~~
~~and secondary stations being able to reduce traffic in the uplink~~
10 ~~and downlink control channels~~ the method comprising:

entering the uplink and downlink control channel into a
dormant state after a first data transmission on the data
channel;

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- transmitting control information on the uplink and downlink
- 15 control channels during transmission of data packets; and
- transmitting an amount of control information on the uplink
and downlink control channels while the uplink and downlink
control channels are in the dormant state which is less than the
amount of control information transmitted on the uplink and
- 20 downlink control channels during transmission of data packets on
the data channel.

Claim 13 (Currently Amended). A method as claimed in claim
12, ~~characterised by~~ wherein the uplink and downlink control
channels enter into the dormant state and the reduction in
traffic in transmission of control information on the uplink and

5 downlink control channels being is initiated after a
predetermined period has passed without transmission of a data
packet on the data channel after the first data transmission.

Claim 14 (Currently Amended). A method as claimed in claim
12 ~~or 13, characterised by~~ wherein control information being is
transmitted in allocated time slots, and by the reduction in
traffic including a reduction in the amount of control

5 information transmitted while the uplink and downlink control
channels are in the dormant state compared to that transmitted
during transmission of data packets is realized by transmitting

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control information in one out of every N available slots while
the uplink and downlink control channels are in the dormant
10 state, where N is an integer greater than 1.

Claim 15 (New). A system as claimed in claim 2, wherein the
traffic reduction means are arranged to transmit control
information on the uplink and downlink control channels in
allocated time slots and operate to transmit control information
5 in one out of every N available slots when the uplink and
downlink control channels are in the dormant state, where N is an
integer greater than 1.

Claim 16 (New). A system as claimed in claim 3, wherein the
traffic reduction means are arranged to transmit control
information on the uplink and downlink control channels in
allocated time slots and operate to transmit control information
5 in one out of every N available slots when the uplink and
downlink control channels are in the dormant state, where N is an
integer greater than 1.

Claim 17 (New). A primary station as claimed in claim 7,
wherein the traffic reduction means are arranged to transmit
control information on the uplink and downlink control channels
in allocated time slots and operate to transmit control

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- 5 information in one out of every N available slots when the uplink and downlink control channels are in the dormant state, where N is an integer greater than 1.

Claim 18 (New). A secondary station as claimed in claim 10, wherein the traffic reduction means are arranged to transmit control information in allocated time slots and operate to transmit control information in one out of every N available
5 slots when the uplink and downlink control channels are in the dormant state, where N is an integer greater than 1.

Claim 19 (New). A method as claimed in claim 13, wherein control information is transmitted in allocated time slots, and the reduction in the amount of control information transmitted while the uplink and downlink control channels are in the dormant
5 state compared to that transmitted during transmission of data packets is realized by transmitting control information in one out of every N available slots while the uplink and downlink control channels are in the dormant state, where N is an integer greater than 1.

Claim 20 (New). A method as claimed in claim 12, wherein the uplink and downlink control channels enter into the dormant state and the reduction in transmission of control information on

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the uplink and downlink control channels is initiated immediately
5 after the first data transmission when the control means
determines that no additional data transmission is currently
available for transmission.